Southern Regional Research Laboratory
New Orleans 19, Louisiana
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To: Director and Laboratory Staff
From: Survey and Appraisal Section, Cotton Processing Division
Subject: SURVEY NOTES

F A R M S I T U A T I O N

Consumer demand continues to maintain farm product prices at high levels and is likely to continue strong through the year. Prices received by farmers have generally improved since the drop in early February but in mid-April still averaged 5 percent below the January record. During the next few months agricultural prices will be increasingly affected by changes in crop prospects in this country and abroad. Strong demand and seasonally small meat production are likely to hold prices of meat animals high at least for the next few months. Consumer demand for dairy products and eggs continues very high. If crop conditions continue favorable, prices of wheat and corn are expected to decline seasonally. With the passage of the European Recovery Program, export prospects for cotton, tobacco and fruit have improved.

Demand and Price Situation, BAE, May 12, 1948

L I N T C O T T O N

1947 COTTON CROP SECOND MOST VALUABLE IN HISTORY

The 1947 cotton crop was the second most valuable on record, exceeded only in 1919 with a 2-1/2% higher value. The combined value of cotton and cottonseed in 1947 was $2,291 million, as compared with $1,662 million in 1946 and a 10-year average of $1,059 million. Lint cotton, valued at $1,889 million, was up 34% over last year, the sharp upturn in production more than offsetting the slight drop in price. Cottonseed, at $402 million, was up 59% over last year.

COTTON PRICES CLIMB; MILL MARGINS CONTINUE TO FALL

Cotton continued to advance in price during the last month, with Middling 15/16-inch cotton, delivered at mills, near 40 cents per pound on May 20th. Cotton Fabric prices and mill margins dropped from March to April and it was reported in the Daily News Record (May 10th) that quotations on some cloths have declined from 8 to 10 cents a yard since the beginning of the year. "With the notable exceptions of printcloths and drills for future deliveries, the Worth Street market has been in the doldrums since the turn of the year."

Table 1.- Prices of raw cotton, rayon staple, and cotton fabrics, and cotton mill margins in cents

	May 20 1948	April 1948	March 1948	April 1947	Average 1945
Cotton, Middling 15/16" delivered at mills, lb.....	39.55	38.46	35.36	36.57	23.76
Rayon, viscose staple, equivalent price 1/, lb....	32.04	32.04	32.04	28.48	22.25
Cotton fabrics, average 17 constructions 2/.....	-	83.42	87.11	86.15	43.21
Mill margins 3/					
Average, 17 cotton fabrics.	-	46.30	52.98	51.25	20.86
Average, 6 printcloths.....	-	63.71	74.08	74.57	22.61
Average, 3 sheetings.....	-	34.86	43.68	44.61	16.77
Average, 4 drills.....	-	34.96	38.24	30.85	17.68
Average, 2 ducks.....	-	29.61	32.41	30.09	19.85

1/ Cost to mill of same amount of usable fiber as supplied by one pound of cotton (rayon price x.89).

2/ Price of approximate quantity of cloth obtainable from a pound of cotton with adjustments for saleable wastes (Cotton Branch,PMA).

3/ Difference between cloth prices and prices (10-market average) of cotton assumed to be used in each kind of cloth. (Cotton Branch, PMA).

COTTON CARRYOVER TO BE LOW AGAIN THIS YEAR

Consumption of cotton in April was about 53,000 bales less than a year ago but the number of spindle hours run on cotton was greater than in April 1947 (table 2). It now appears that cotton consumption during this crop year will total 9.4 million bales and exports 2.4 million bales,as compared with a crop of 11.5 million bales. The expected carryover on July 31 will be only slightly larger than a year ago (table 3.). If domestic consumption of cotton continues at the present rate, and if exports increase somewhat because of the European Relief Plan, as is expected, it appears that cotton will continue "tight" for another year.

Table 2. Cotton consumption and stocks, and spindle hours in cotton mills

	April 1948	March 1948	February 1948	April 1947
Consumption bales.....	829,730	878,714	785,231	882,880
On hand, 1000 bales	5,056	5,625	6,713	4,619
Active spindle hours, billions.	10.7	11.0	9.8	10.2
Spindle activity, percent of 80-hour capacity 1/.....	136.1	133.6	137.6	128.3

1/ Includes 679 million cotton system spindle hours on fibers other than cotton.

From Census report.

Table 3.- Supply and distribution of cotton, United States, 1935-47

CROP YEAR	SUPPLY				DISTRIBUTION		
	Carryover Aug. 1 1/	Ginnings	Imports	Total supply	Consumption	Exports	Carryover July 31 1/
	Running bales, thousands 2/						
Averages:							
1935-39:	8,340	12,802	170	21,312	6,938	5,303	9,012
1940-44:	10,954	11,674	190	22,818	10,301	1,372	11,073
1945	11,164	8,852	342	20,358	9,163	3,531	7,521
1946	7,521	8,517	284	16,322	10,036	3,544	2,521
1947 3/	2,521	11,549	398	14,468	9,400	2,400	2,668

1/ Carryover does not include bales destroyed by fire, etc.
2/ Running bales counting round bales as half bales, and imports given in equivalent bales of 500 pounds.
3/ Partially estimated on basis of 8 months data of 1947-48 crop year.
From Bureau of Census and BAE reports.

RECOMMENDED RMA COTTON PROJECTS OUTLINED

The RMA Cotton and Cottonseed Advisory Committee of the Department of Agriculture has made the following recommendations for research in 1949:

A. MARKETING.- (1) Marketing with special attention to storage, cleaning, and ginning of mechanically harvested cotton. (2) Standardization and quality evaluation, especially on cottonseed. (3) Facilities and techniques for storage, compression, and physical handling of cotton. (4) Methods and costs of marketing cotton and cottonseed. (5) Margins and costs of cotton, cottonseed and products. (6) Factors affecting demand and supply, including consumer preference studies. (7) Additional market information and educational work.

B. UTILIZATION.- (1) Cotton fiber properties. (2) Yarn and fabric properties. (3) Development of new and improved cotton products through processing, chemical treatment, and other methods. (4) Processing methods and machinery. (5) Improved methods and equipment for testing cotton fibers, yarns, fabrics, etc. (6) Technical problems relating to development of new and improved products from cottonseed. (7) Economic studies of cotton and cottonseed utilization problems. (8) Provision of additional facilities at SRRL.

C. PRODUCTION.- (1) Mechanization in all aspects should be given special emphasis. (2) Cotton breeding and genetics. (3) Disease and insect-control studies. (4) Soil management, fertilization, general economics, etc.

Journal of Commerce, Apr. 26, 1948, p.16A

MECHANIZATION SAVINGS CITED BY OSCAR JOHNSON

Tests made by the Texas Agricultural Experiment Station show that the two-row tractor mounted stripper is capable of harvesting nearly a bale of cotton per hour. This is in comparison with 7-1/2 days required by the average human picker to gather a bale of lint cotton. The Oklahoma Experiment Station found that stripper harvesting costs $24.82 less per bale than hand snapping on one-half-bale-to-the-acre land. The mechanical cotton picker in the Delta

will harvest a bale in two hours and 20 minutes compared with a rate of 15 pounds of seed cotton an hour, and will perform the work of 25 to 50 field hands. During 1947 season, 250 mechanical pickers were in operation, 80% in the Delta, 25% in the Southwest and Far West, and 5% in Southeast.

Oscar Johnson, Journal of Commerce, April 26, 1948, p. 20A.

NEW COTTON PICKER BUILT

A new type cotton picker has been built by Riley Ellis and his son Drewry at Griffin, Georgia. Priced in the low-cost range, the new device, according to its backers, is a practical machine within the reach of all farmers and is expected to "revolutionize cotton growing." The new picker has been patented and a corporation has been formed to manufacture and market it. Approximately 50 of the finished machines are expected to be ready for the market this Fall. The Ellis picker is attached to a tractor, truck or jeep, and is powered by the tractor or auto to which it is attached. The single unit picker weighs only 600 pounds, and picks one cotton row at a time. It is expected to be priced between $1,250 and $1,500 per unit.

Southern Textile News, May 1, 1948, p. 6

C O T T O N T E X T I L E I N D U S T R Y

TEXTILES CONTINUE AS NATION'S MOST PROFITABLE INDUSTRY

The textile and apparel industry continued to be the most profitable industry in the country during the first quarter of 1948 with profits at an annual rate of 28% on the investment. Like most other industries, there was a slight decline from the last quarter of 1947.

Table 4.- Net income of leading corporations for first quarter, 1948

Industry	Annual rate of return		
	1st.Qtr. 1947	4th Qtr. 1947	1st Qtr. 1948
	Percent	Percent	Percent
All manufacturing, 430 cos.	15.9	20.1	17.5
Textiles and apparel, 28 cos.	25.4	31.1	27.7
Pulp and paper products, 18 cos.	25.3	24.9	21.2
Chemicals, drugs, etc., 38 cos.	17.6	17.9	16.7

Monthly letter, National City Bank of N.Y., May 1948.

EXPORTS NEEDED FOR COTTON INDUSTRY TO MAINTAIN OPERATIONS

Present spindles in place in the United States, if operated at full capacity, will produce more goods than are required by normal peacetime domestic consumption. Substantial exports thus are needed if the cotton textile industry is to maintain employment, provide a market for American cotton (now that little American cotton is exported), and to continue to operate at a profit.

Fuller E. Callaway before American Cotton Manufacturers Convention, Journal of Commerce, April 26, 1948.

SLIGHT INCREASE IN COTTON SPINDLES EXPECTED; NO EXCESS EXPECTED

"Southern millmen agree" that an increase of not more than 1 or 2 million spindles in the 24 million spindles now in place in U.S. cotton mills can be expected in the next few years. Most new spindles being installed are replacements. Normal steady replacement of worn out machinery, impossible during the war, is now being compensated by steadily increasing deliveries. The industry does not expect pressure on prices from excess spindleage such as it had before war.

Journal of Commerce, April 26, 1948, p. 1

LOOMS PER WEAVER IN VARIOUS COUNTRIES CITED

In Mexico today the average weaver operates two looms; in South America he averages about four; in England they boast of the increase from an average of six to eight; in Japan, before the war, they were averaging more than twenty looms per weaver; and in the United States the average is somewhere between sixty and one hundred.

Wm. P. Jacobs before American Cotton Manufacturers Convention, Journal of Commerce, April 26, 1948, p.14A.

HALF OF COTTON LOOMS OVER 20 YEARS OLD

About half of the cotton looms in the United States are estimated to be more than 20 years old, according to a report titled Cotton Cloth, issued by the U. S. Tariff Commission. The average age of cotton spindles in place probably also exceeds 20 years in age, adds the report. At least 40 percent of the spindles now operated were installed before 1914, and only by rebuilding the machines could they be adpated to recent improvements, particularly long-draft spinning.

Daily News Record, May 10, 1948, p. 26.

USE OF AUTOMATIC CONTROLS, AIR CONDITIONING IN TEXTILE INDUSTRY GROWING RAPIDLY

Since the war, an estimated 80 percent of the mills in the South have installed equipment which controls entire steps of processing automatically. Mill operators have learned that their whole production picture can be improved through the use of the more modern methods. Automatic control of slasher, sizing, bleaching and dyeing operations has become generally accepted as a requirement in the highly competitive industry, it was pointed out by Karl W. Selden, Jr., Brown Instrument Company. The installation of instruments to control these processes has amounted to a substantial part of the multi-million dollar post-war modernization program. Mills also are turning to complete air conditioning of processing rooms as a means of stepping up efficiency and improving quality. "The movement to refrigerated air conditioning since the war has been one of the outstanding developments of the industry," said Charles A. Miller, of J. E. Sirrine & Co. prominent textile engineers. "Three years ago not a single Southern mill had refrigeration. Today more than 100 have it, and the number is growing monthly."

Southern Textile News, April 24, 1948, p. 12.

NEW COTTON MILLS PLANNED IN LOUISIANA

Horvath Mills Inc. and West Mills Inc. have sold their plant at West Texas to R. D. Hughes Industries Inc. of Dallas, which will rename it "West Cotton Mills Division," and manufacture duck and twine. Hughes operates two retail drapery stores in Dallas. "R. D. Hughes Industries plan to operate a series of mills in the Southwest...The establishment of new mills in the Louisiana district, as well as the purchase of other plants now in operation, figure in the future planning of the concern..."

Daily News Record, May 19, 1948, p. 24.

RUSSIAN COTTON TEXTILE PRODUCTION DOWN FROM PREWAR

Russian cotton textile production totaled 2,520,000,000 meters of cotton fabric (.9144 of a yard), 65% of prewar, while woolen fabric production was about 100 million meters. 1950 goal is 4,686 million meters of cotton fabric, 159 million of woolen, 141 million silk, 190 linen. (Dr. W. Y. Elliot, House Select Committee on Foreign Aid).

Daily News Record, May 5, 1948, p. 32.

COTTON PRODUCTS

BAGS: CAMPAIGN TO MAINTAIN COTTON'S MARKET UNDER WAY: COMPARATIVE BAG PRICES GIVEN

For several years, the National Cotton Council and the Textile Bag Manufacturers Association have conducted a cooperative campaign to maintain the market for cotton in bags. Cotton manufacturers also are now participating in this program. At the recent American Cotton Manufacturers Convention in New Orleans, Norman Elsas of Fulton Bag & Cotton Mills said there had been a decline of 10% from 1946 to 1947 in use of cotton fabrics for bags. It was stressed that "the battle is currently between paper and cotton for flour bag use with paper having already won cement, lime, and gypsum and threatening the largest market of all in feed bags." Prices as of May 10th for cotton, burlap, and paper flour bags, new and used, and differences between these quotations, to indicate the approximate cost to the first user, are given in table 5.

Table 5.- Prices of new and second-hand 100-lb. flour bags, and differences

	New bags St. Louis 1/	Second-hand bags New York 2/	New bags less second-hand difference
Cotton	$265.50	$115.00	$150.50
Burlap	214.95	100.00	114.95
Paper	108.65	-	108.65

1/ Cotton, 37" 4.00 sheeting cut 43"; burlap 38" 10 oz. cut 43"; paper, 18 x 4-1/2 x 36 - 3/4", all l.c.l. shipments. From a large bag manufacturer.

2/ Approximate quotations, Daily Mill Stock Reporter.

FINISHES: REPORT AVONDALE EXPERIMENTING WITH NEW COTTONS FINISH

Avondale mills and two other mill organizations are experimenting with the new wrinkle-resistant finish for cotton fabrics which has been announced by American Cyanamid Co., according to reports in the market. Avondale has been conducting these experiments for two years preparatory to applying the finish on a large scale basis, it was said. Officials of Avondale would make no statement.

Daily News Record, April 23, 1948, p. 27.

NON-WOVEN FABRICS: OUTPUT AT AVONDALE INCREASES 5 TIMES

"A new four-color printing machine, using pigment colors, for non-woven fabric line is now in operation. With broadening markets, this production has been increased four to six times over a year ago. From three layers in the web, the non-woven fabric here now is made of five layers, with improvements in the resin treatment and in the calendering. The type of bonding agent used depends upon the specific end-use, whether for the laminating trade, for coating or for the drapery trade. Considerable attention has been given to disposable draperies, where the company does everything except make the drape, using cotton, rayon, and cotton and all-spun rayon."

Daily News Record, May 12, 1948, p. 28.

NON-WOVEN FABRICS: WEST POINT DEVELOPS NEW TYPE

West Point Manufacturing Co., of West Point, Ga., has developed a new type non-woven fabric with equal strength in all directions, according to a report in the New York market. The company is understood to have been experimenting on this new fabric for about a year, and the product is said to be a revolutionary departure from any other non-woven fabric now on the market. All types of fabrics are reported to have been used in the experiments conducted at the company's plants, with cotton, rayon and mixtures used with equal success. The company is said to be planning to erect a special plant for the production of the new non-woven fabric, employing the use of specially designed equipment. The quality of equal strength in all directions in a non-woven fabric is stated in the market as being of unusual character in this type of fabric, and keen interest is being evinced in this product.

Extensive tests are reported to have been conducted on both production and utilization of the new type of fabric. Efforts to obtain additional information on this report were unavailing.

Daily News Record, May 14, 1948, p. 1.

HATS: COTTON HATS GAIN IN USE

Cotton hats have emerged from comparative obscurity during the last few years because they are (1) low in price, (2) light and comfortable, (3) they received an impetus from the great demand for them during the war for defense plant and shipyard workers. Cotton hats today are made in a profusion of colors, with special hats for different sports, as sport caps, and berets, and many are water-repellant.

Eugene B. Saunders, Stylist and Treasurer of Flip-It, Inc.
Daily News Record, April 22, 1948, p. 49.

PLASTIC-COVERED COTTON AND OTHER YARNS DISCUSSED

Plastic film covered yarns use thin cast films made by Goodrich, Bakelite, Reynolds Research, and others, are available clear and in opaque colors, and have great strength, noninflammability, resistance to abrasion, etc. They consist of fine tubes in which rayon, cotton, etc., yarn can move, and are made by wrapping and sealing the film around the yarn in Tensolizing machines. Used with Fiberglas, it protects yarn from abrasion, supplies color, and makes it safe to handle and wear. Uses include upholstery fabrics, webbing, braids and cords, shoe fabrics, drapes, table coverings, insulation, etc.

J. P. Mathias, Tensolite Corp.
Daily News Record, May 6, 1948, Sec. 2, p. 16

SODIUM SILICATE USE IN TEXTILES DISCUSSED

Sodium silicate, familiar to farmers as waterglass egg preservative, is used for dewaxing and purifying various types of plant fiber, for scrubbing out equipment and removing sulfur from processed fiber in the rayon industry, as a coating to keep fibers or textiles from coming in contact with iron parts in manufacture, to remove shine from rayon, to fireproof canvas, and, mixed with soap, is a more efficient cleaner than either component alone. "Scientific research has shown that the application of a colloidal silica to cotton prior to spinning results in increases as high as 55%, commonly of 25 to 35 percent, with lower twists than those of untreated cotton." Addition of this silica makes possible use of regular cotton dyes on rayon fiber, while silica sols are used with rayon and casein to give a surface roughness resembling that of wool and to increase fire resistance.

Dr. Reynold C. Merrill, Research Manager of the Philadelphia Quartz Co., before Western Carolina Section, A.C.S., Daily News Record, April 15,1948.

TIRES: S.A. STEERE, GOODYEAR, DISCUSSES COTTON'S POSITION

"Cotton still is favored in popular size passenger car and industrial tires. For example, Goodyear this month announced two new lines of tires, and both employ cotton cord and fabric. A seven-mile long installation of conveyor belts--second longest ever constructed--that Goodyear is building for Bull Shoals Dam, Ark., will utilize 250,000 pounds of cotton fabric. Most mechanical goods made by Goodyear--such as conveyor belts, V-belts, hose, agricultural belting, etc.--use cotton as the basic fabric. About 15 percent of the total cotton fabric consumed by Goodyear goes into such products. . ...

"Our own research staff has suggested ... more careful handling in farm to market operations, particularly in ginning." In manufacturing tires, 472 million fibers must be spliced together "without undue loss of strength or flex life." "We cannot be satisfied until the possibilities of a given cotton are fully realized. Another complaint is that the cotton industry speaks three different technical languages--one to describe the fiber's physical properties, a second to describe the yarn, and a third to describe the cord. Goodyear's four mills have a current capacity of 7 million pounds of cotton and 5 million pounds of rayon and nylon a month, used exclusively in the company's factories. We also buy tire cord and fabric from other sources."

S. A. Steare, Vice President of Textile Mills, Goodyear, Daily News Record, April 22,1948, p. 16.

TIRE FABRIC PRODUCTION STAYS HIGH; COTTON'S PERCENTAGE UNCHANGED

Despite predictions to the contrary, production of tire fabric remained at high levels in the first quarter. Cotton's percentage was 59%, varying only slightly from the percentage of this market which it has held since 1945.

Table 6.- Production of tire fabric in United States, 1946-48

Year	Quantities			Percentages		
	Cotton	Rayon and nylon	Total	Cotton	Rayon and nylon	Total
	Million pounds	Million pounds	Million pounds	Percent	Percent	Percent
1946	311	212	523	59	41	100
1947	345	230	575	60	40	100
1947, 1st. qtr.	93	57	150	62	38	100
4th. qtr.	84	62	146	58	42	100
1948, 1st. qtr.	88	61	149	59	41	100

Compiled from Facts For Industry Series, Bureau of the Census.

COTTON GOODS OUTPUT AT HIGHEST LEVEL SINCE 1943

Production of cotton broad woven goods totaled 2,579 million linear yards in the first quarter of 1948, 10 million yards more than in October - December 1947, and 124 million yards more than in the first quarter of last year. It was the largest quarter's output since 1943. There were only small changes in the types of goods produced from the preceding 3 months.

Based on Facts For Industry, Bureau of the Census.

TIRES: FIRESTONE SEES COTTON CONTINUING AS VITAL FACTOR

Cotton will continue to be one of the most important factors in the manufacture of the average automobile tire, according to Harvey S. Firestone, Jr., chairman of the Firestone Tire & Rubber Co., Akron, Ohio, in a talk in Atlanta. He said that Firestone alone uses the cotton from 300,000 acres of land, in the manufacture of tire cord. Although rayon cord is used to advantage in certain types of cord, the Firestone official declared he believed that cotton cord is better for most regular use. Tire production currently is filling the demand, he said, with unit output being 38 percent ahead of 1940 figures.

Daily News Record, May 14, 1948, p. 28.

TIRE FABRIC PRICES

Tire fabric prices given last month remain unchanged.

TOWELS: FTC ISSUES ORDER AGAINST "SORBTEX" TOWEL ADVERTISING

The Federal Trade Commission, on basis of tests made at the National Bureau of Standards and at private laboratories, has forbidden the Sorbtex Foundation, Richmond, Va., to represent that Sorbtex makes towels more absorbent, increases the "dryability" of towels or causes towels to dry faster, unless such representations are limited to towels prior to laundering. "As a result of the laundering process, particularly after two or three launderings, the solution is almost completely removed from the towel," which then has no appreciable absorbtive capacity in excess of a towel not treated.

According to Ralph L. Dombrower of the Sorbtex Co., "Sorbtex makes towels immediately usable before laundering, increases the wipability and dryability of towels, makes white towels whiter, intensifies colors in colored towels," etc...."Basically, the difference in the Sorbtex Process and traditional, conventional methods of gaining absorbency is that kier boiling and cold bleaching are unnecessary to obtain the immediate usability and dryability so desirable..." It "remains the outstanding achievement of the decade in the towel industry."

Daily News Record, April 30, 1948, p. 10

"VENTILE" CLOTH - ENGLISH -OUTPUT EXPANDS

The report for 1947 of the Ventile Fabrics Association of Great Britain records the introduction of a new "Ventile" cloth. This cloth, which is known as "L.34" comes between the L.32 and L.24 specifications which had existed previously. It weighs approximately 4.8 oz. per square yard, and it is considered that it will have a wider range of usefulness than L.32, that more spinners will be able to supply the necessary yarns, and that weaving will be facilitated. The quantity of "Ventile" fabric sold and delivered last year was about 433,500 yards, compared with only 61,700 yards in 1946.

Manchester Guardian, April 12, 1948 as quoted in a Courtaulds Summary.

COMPETITIVE MATERIALS

CONSUMPTION OF NONCELLULOSIC MAN-MADE FIBERS DECLINES SLIGHTLY IN 1947

Although consumption of rayon in the United States jumped from 482 million pounds in 1940 to 988 million pounds in 1947, increasing 113 million pounds in 1947 alone, aggregate consumption of other synthetic fibers declined slightly in 1947. Consumption of these fibers totaled 49.8 million pounds in 1947, as compared with a peak of 53.3 million pounds in 1946 (table 7). (These data were compiled from confidential reports to the Survey and Appraisal Section and are the only authentic data on the subject).

Table 7.- Consumption of synthetic fibers other than rayon 1/ in the United States, 1940-47

Year	Quantity
	1,000 pounds
1940	4,471
1941	11,663
1942	23,743
1943	37,200
1944	46,368
1945	49,292
1946	53,329
1947	49,788

1/Includes domestic sales of nylon yarn and staple; sales of Aralac staple; estimated consumption of Saran as a textile fiber; production of glass fiber continuous filament yarn and staple, 1941-46, shipments, 1947; and consumption of Vinyon yarn and staple.
Compiled from confidential reports of manufacturers except Fiberglas total for 1940, which was partially estimated.

"FIBER A" PROPERTIES GIVEN

The site purchased by du Pont near Camden, S. C., may be used for Fiber A production. Fiber A is described as polymethacrylonitrile and has been made on a semi-works scale at du Pont's Waynesboro, Va. acetate rayon plant. It can be made either on viscose or acetate spinning equipment. There are reported to be dyeing problems to overcome because of poor dye absorption. It is said to be superior to nylon in resistance to chemicals and to effect of ultraviolet rays. It is said to have "electrical properties, to be resistant to microorganisms and body acids, and to be stretched and oriented like nylon." It can be made in fine filaments, and fabrics are said to show crease resistance.

Following are data on properties: "Tensile strength, dry, 60,000 to 75,000 pounds per square inch; tensile strength, wet, 57,000 to 70,000 pounds per square inch; tenacity, dry, 4 to 5 grams per denier; tenacity, wet, 3.8 to to 4.7 grams per denier; tenacity, loop, 3.4 to 4.2 grams per denier; elongation, dry, 14 to 22 percent; elongation, wet, 14 to 21 percent; elongation, loop, 10 to 18 percent; specific gravity, 1.17; elastic recover, from 2

percent stretch, 100 percent, elastic recovery from 4 percent stretch, 67 percent; moisture regain, 60 percent R.H., 0.9 to 2.0 percent; water absorption 3 percent; shrinkage in water at 100 degrees C., none; burning rate, between that of cellulose and cellulose acetate; sticking temperature, 190 to 220 degrees C; discoloration on heating, yellow on prolonged heating at 110 degrees C; flex life, 19,000; abrasion resistance of 1.5 ounce fabric (Taber) 366 revolutions (about the same as cotton); yarn sizes, 40 to 600 denier, 3 denier per filament."

Daily News Record, April 14, 1948, p. 32.

FIBERGLAS USES AND SPECIFICATIONS

Considerable literature on specifications and use of glass fiber has been received and is on file in the Survey and Appraisal Section. Among the items are a "Fiberglas Bibliography." Of interest to the Laboratory is Fiberglas "O-C Combination Textiles," yarns, cords, tapes, and cloths--made by combining Fiberglas yarns with asbestos, cotton, or synthetic yarn in various percentages--so as to add strength; reduce shrinkage and stretching; provide resistance to fire, rot and decay; with applications in electrical insulation, filtration, and welding curtains, in radio grille cloth, lamp shade fabrics, etc. Also noted, was a "Fiberglas" mop to use in handling asphalt on roofs.

MOHAIR PRODUCTION DOWN

Mohair production totaled 18,476,000 pounds in 1947, smallest since 1938. The 1947 clip was 4% smaller than the 19,329,000 pounds produced in 1946 and 5% below the 1936-45 average of 19,451,000 pounds. Production in Arizona, California, and Utah was smallest on record dating back to 1909. Of the 1947 total, 17,407,000 pounds was produced in Texas. Total cash receipts for the 1947 crop was $11,119,000.

BAE Release, March 3, 1948.

MOHAIR GROWERS HOPE GOVT. WILL SUBSIDIZE EXPORTS

Weighted down by a 10-million-pound warehouse surplus of mohair, domestic mohair producers are hopeful, after Government conferences, of getting exports of the fiber subsidized under Section 32 of the Agriculture Act. The Department has assigned an industry man full time to do research work on possible expanded markets for mohair. He is being joined in this effort by other regular agriculture department researchers, it was said. At the Quartermaster Corps, the mohair producers were advised the Army had no immediate intention of specifying mohair in procurement orders. Except for neckties, QM is not particularly interested in mohair for the Army.

Daily News Record, May 5, 1948, p. 2.

NEW NYLON PLANT ALMOST COMPLETED

Exterior construction work is approximately 95 percent complete and about 70 percent of the equipment has been installed at the $20,000,000 E. I. du Pont de Nemours & Co. nylon yarn plant at Chattanooga, Tenn. The plant is scheduled to start production in early summer.

Journal of Commerce, May 5, 1948, p. 17.

NEW BOOKLET ON NYLON RECEIVED

Uses and properties of nylon are given in a popular booklet just received from DuPont entitled "Nylon textile fibers in industry." This booklet is on file in the Survey and Appraisal Section.

NYLON NOW USED IN CARPETS

The first commercial introduction of spun nylon staple in carpets has been made in a line of carpets sold under the name of "Splendante" which are manufactured by the Nye-Wait Co., Auburn, N. Y., and sold by Raymond & Heller. With a five-ply cotton yarn back and woven on the wilton principle, the carpeting achieves a new contrasting effect in the pattern by having pile cut of two different heights. This is achieved by a newly developed method of the mill in cutting the pile in a warp-wise direction instead of the conventional weft-wise direction. Two different types of carpet are available, one with a scroll-like pattern and the other in a plain effect.

The carpet is woven of spun nylon yarns mule-spun on the woolen system and the staple used is 15 denier with a staple length of three to four inches. Mechanical abrasion tests are said to show the carpet to be vastly superior to wool and a practical use test was the use last winter of a large carpet of this construction at the Sea View Hotel at Bal Harbour, Fla. This carpet which was on view yesterday had been subjected to severe use in a lounge and cocktail room. It is believed by those making the rug that the nylon pile has a somewhat higher resilience than a carpet wool pile in similar construction. Among the selling points is the fact that the carpet will not support flame and while a flame may melt it, the rug will not burn.

Normal commercial cleaning is reported staisfactory for the carpet, either the so-called shampoo or drycleaning. The nylon is dyed with wool-type dyes and is said to be fast to standard methods of cleansing and to light. The carpets are strictly in the luxury class and the price per square yard wholesale is $38 with expected retail prices being in the range of $46.50 to $59.50 per square yard.

Daily News Record, May 12, 1948, Sec.1,p.20.

RAMIE DEGUMMED FIBER ONLY 3.6 PERCENT OF HARVESTED GROWTH

Sea Island Mills, Inc. claims their Siland decorticator has a capacity of approximately 40,000 pounds per hour of complete and mature field growth, which produces about 1800 pounds of decorticated dry ribbons cleaned of bark and core. This is further reduced by removal of gums and foreign matter to about 1450 pounds. Using the above data the degummed decorticated ramie fiber is 3.6 percent of the harvested stalks (as indicated in table below).

40,000 pounds	100.0 percent	Harvested fiber (stalks)
38,200 pounds	95.5 percent	Bark and core
350 pounds	0.9 percent	Gum and foreign matter
1,450 pounds	3.6 percent	Degummed fiber

Some cotton mills are producing 100 percent Siland yarns in counts from 8/1 to 14/1 and plies up to 8/8/5. They are also producing fabrics of 100 percent Siland ramie and blends of 50 percent Siland ramie and 50 percent viscose rayon staple.

The range of fabric being made from Siland fiber is from a 4 yard shirting and 8 ounce suiting to 22 ounce filter cloths as well as fabrics being used in laminated panels and gears, and gas mantles.

Southern Textile News, April 17, 1948, p. 26.
S. I. Mills.

LOWER COST PROCESS FOR CARBON DISULFIDE, IMPORTANT IN MAKING VISCOSE RAYON, ANNOUNCED

A new, cheap method for producing carbon disulfide, one of the principal raw materials for viscose rayon, was discussed by Dr. C. W. Siller, of New Jersey Zinc Co., at the A.C.S. meeting in Chicago in April. The new method involves synthesis from hard coal and the waste sulfur dioxide gas evolved in smelting some metals. Sulfur dioxide gas is piped into a tube packed with hard coal and heated to more than 1,000 degrees Centigrade, according to Dr. Siller, who asserted that 90 percent of the sulfur dioxide can be converted to carbon disulfide. If carbon monoxide is burned to furnish heat for the reaction, the process can be made continuous and automatic, he added. In a recently developed electrical process for manufacturing carbon disulfide, a cheap source of electricity is necessary for economical operation, he stated. If the new method is used, much greater latitude is allowed in the selection of a factory location.

Daily News Record, April 23, 1948, p. 26.

RAYON YARN SUBSTITUTED FOR JUTE IN ENGLAND

"Fibro" rayon yarn has begun to be regarded in the United Kingdom as an appropriate substitute for jute yarns in certain outlets, although it is admitted that its threat of replacing jute in utility bags is still of minor nature. However, a permanent loss to Fibro has been suffered by jute in certain lining and decorative type fabrics where developments along these lines have been considerable in Dundee, Scotland, and in other jute manufacturing centers.

Journal of Commerce, N.Y., May 12, 1948, p. 16.

PART RAYON SHEETS BEING TRIED BY PEPPERELL

Rayon and cotton blended sheets made by Pepperell in a construction comparable to the company's percale sheets have been placed on sale at G. Fox & Co., Inc., Hartford, Conn. They are 50% Avisco rayon. Purchasers are asked to furnish information as to service given by the sheets. "American Viscose Corporation has set up in the store a rayon exhibition consisting of a rayon yarn spinning unit in operation."

Daily News Record, May 19, 1948, p. 14.

(With rayon staple much cheaper than cotton there is now a decided economic incentive to use rayon wherever possible. There have been items in the New York papers recently about "adulterating" cotton fabrics such as piques with rayon.)

RAYON SHIRTS SAID TO LAUNDER ABOUT AS WELL AS COTTON

Cotton can withstand about 25 to 35 launderings when it is in the form of a man's dress shirt, depending upon how hard an individual is on his shirts. Viscose rayons can undergo just about as much "processing," according to the American Institute of Laundering, Joliet, Illinois.

Daily News Record, May 18, 1948, p. 24.

FINE WOOLS VERY TIGHT: RESEARCH UNDER WAY TO ENABLE USE OF MEDIUM WOOLS IN FINE FABRICS

Wool prices currently are highest in 25 years , with fine long-staple domestic wools selling for $1.55 to $1.65 a clean pound in Boston and comparable fine Australian wools at $1.85 to $2.05 a pound. With the public demanding worsteds, fine wools have become extremely scarce and now command a 50% premium over medium-grades wool, one of the widest "in memory." "The well-healed public,"according to the American Woolen Co., will continue to demand higher-priced fabrics made of fine wool but eventually will have to take lower-quality materials, although this won't happen this year. Moses Pendleton, President of American Woolen Co., predicts an advance of 25 cents per yard in worsteds if wool prices do not ease. Since the war, two-thirds of the British Empire stocks of 10.5 million bales (over 3 billion pounds) of grease wool plus the 4.5-million-bale Empire clips of 1946 and 1947 have been absorbed. American mills, using double the wool they used prewar, "are jittery" because the world wool surplus is now absorbed and the American sheep population is now at lowest levels in 82 years. Reason:- increases in wool prices have not kept pace with increases in prices for lamb and beef.

Many still raising sheep are concentrating on meat types with result that only 50% of domestic production is fine wool compared with 60% to 70% prewar. Wool groups in this country and abroad, including American Wool Council, National Wool Growers Association, and the International Wool Secretarial have started a 4-year research program to find ways of using medium-grade wools for fine textures desired by the public. Research departments of big wool fabric manufacturers such as J. P. Stevens and Forstmann, and Princeton Textile Institute and the W.R.R.L. have been enlisted in project.

Wall Street Journal, May 17, 1948, p. 1

NEW SHRINKAGE CONTROL PROCESS FOR WOOL ANNOUNCED

Scholle Bros. have introduced a new wet chlorination wool shrinkage control process known as the "Schollerized" treatment,which will be licensed to other firms with provision for strict quality control. The process will withstand any number of washings, has no effect on hand , and only a very small effect on color.

Daily News Record, May 13, 1948, p. 1.

CARPET MANUFACTURERS LOOK TO SYNTHETICS

Annoyed by rising wool prices and shortages of certain needed blending types, carpet manufacturers are intensifying their efforts to use synthetic fibers. Wool is said to contain best properties and synthetic fibers would not be used unless they have comparable resiliency, anti-matting, and color taking properties. Current price spread between nylon and carpet wool is 70 cents per pound. Some carpet manufacturers are making 35 percent nylon-wool experimental carpets while one all-nylon carpet has been placed on the market.

Journal of Commerce, May 17, 1948, p. 17.

SEED FLAX STUDIED AS JUTE SUBSTITUTE

Serious attempts are again being made to use seed flax for spinning into yarns suitable for bagging, as a result of present high jute costs. "The spinners of jute who investigated these possibilities during the war were not

able, either due to the prior treatment of the fiber furnished them, or to the many difficulties of experiment under war controls, to solve the problem of extracting a satisfactory yarn, it was pointed out." "The benefit-payment assisted crop of linseed produces about 300,000 to 400,000 tons of seed flax or straw yearly, of which only a fraction is used for paper-making, it was declared." A spinning sliver has been made and it is expected that this sliver will be spun into yarn shortly. Burlap-weaving facilities, needed to make a seed-flax fabric, however, are rare in this country. The Canadian Government is interested in the development and the Argentine is a good source of supply. "Those experimenting with the process claim that the yarn could be used on knitting machinery. Duck has been woven from seed-flax yarns."

Journal of Commerce, May 24, 1948, p. 2.

(No names were mentioned in this report. Ga. Tech has made "duck" from seed flax, and use of seed flax for textiles is being investigated at University of Minnesota.)

TEXTILE RESEARCH AND EDUCATION

I.T.T. FINANCES AND STAFF DISCUSSED

The Institute of Textile Technology is the largest cooperative research enterprise yet conducted by cotton mills although only 215 mill organizations out of 1,200 have yet joined. Dues amount to $530,000 annually to which is added $250,000 for sponsored research, including important work for the government. It is hoped that the income will reach $1 million annually. Personnel now numbers 114 including "many top-flight men" in their particular divisions of research. The staff is to be augmented further with textile engineers, mechanical engineers, electrical engineers, and biologists. It is planned to have three men in the field, one in New England, one in New York, and one in the South. Currently there are about 100 special projects for various mills. Dues are 10 cents a spindle or 25 cents a bale, whichever is lower. Educational program costs about $125,000 a year with 14 graduate students this year, 29 next year.

Ward Delaney as reported in Daily News Record, May 24, 1948, p. 2.

WHITTIER TO HEAD N. C. COLLEGE TEXTILE DEPT.

Dean Malcolm E. Campbell of the School of Textiles, State College, announced the appointment of Benjamin L. Whittier of Baltimore, Md., as head of the Department of Fabric Development and Construction, effective July 1. Dean Campbell said Whittier will succeed Professor T. R. Hart, who has been named director of instruction in the School of Textiles, effective Sept. 1.

Journal of Commerce , N. Y., May 5, 1948, p. 17.

LOWELL SEEKS FUNDS FOR EXPANSION

Lowell Textile Institute is asking the state legislative committee to approve a $1.5 million expansion program to increase student enrollment to 1,000, and to provide $710,000 for a textile engineering building, $665,000 for a paper and leather building, and $150,000 for an auditorium.

Daily News Record, May 13, 1948, p. 18.

NEW TEXTILE SIZINGS STUDIED AT MELLON

Zein A is under extensive research at Mellon Institute, under a fellowship sponsored by Corn Products Refining Co., as a substitute for high-cost textile sizing. A cellulose acetate warp size equivalent to gelatin standards in every respect with the added advantage of lower cost is now possible. Other workable textile sizes are based on hydroxyethyl cellulose modified to provide adequate adhesion and have been developed for fine glass fibers. Adaptations for nylon and Vinyon fibers are being evaluated.

Daily News Record, May 25, 1948, p. 30.

C O T T O N S E E D A N D P E A N U T S

OIL PRICES CONTINUE TO INCREASE

Prices of edible vegetable oils have continued to rise and cottonseed oil is now priced at 35 cents as compared with an average of 25.9 cents in 1947, 15.8 cents in 1946 and 7.0 cents during 1937-41. "Supply prospects indicate that prices of edible and soap fats and oils in the rest of 1948 are likely to average at least as high as in March if general business activity does not decline."

Table 8. Prices of Vegetable Oils and Meals

	May 1948	April 1948	March 1948	May 1947	September 1946
			Cents per pound		
OILS 1/	May 17	April 19			
Cottonseed oil	35.0	29.0	23.9	23.6	12.5
Peanut oil	34.0	29.5	24.2	24.5	13.0
Soybean oil	25.0	25.0	21.4	21.4	11.8
Corn oil	33.5	29.0	23.2	21.3	12.8
Coconut oil 2/	25.0	25.0	25.4	17.6	11.1
Linseed oil 3/	29.0	29.0	29.2	37.6	16.6
Tung oil 4/	26.0	25.5	26.4	29.2	39.0
			Dollars per ton		
MEALS 5/	May 15				
Cottonseed meal 6/	80.00	80.55	81.15	64.60	62.75
Peanut meal 7/	82.00	85.25	85.50	61.80	67.25
Soybean meal 8/	81.50	86.20	84.75	68.55	66.00
Coconut meal 9/	87.50	82.00	82.20	65.25	59.70
Linseed meal 10/	67.00	72.10	77.00	69.10	59.25

1/ Crude, tanks, f.o.b. mills except noted. From Oil Paint and Drug Reporter (Daily quotations) and from Fats and Oils Situation, BAE (monthly quotations).
2/ Crude, tanks, Pacific Coast.
3/ Raw, drums, carlots, N.Y.
4/ Drums, carlots, N.Y.
5/ Bagged carlots, as given in Feedstuffs (Daily Quotations) and Feed Situation, BAE (monthly quotations).
6/ 41 percent protein, Memphis.
7/ 45 percent protein, S.E. Mills
8/ 41 percent protein, Chicago.
9/ 19 percent protein, Los Angeles.
10/ 32 percent protein, Minneapolis, prior to May 1947; 34 percent protein after that date.

COTTONSEED CAKE AND MEAL OUTPUT SHARPLY HIGHER

The Census Bureau reported on May 13th that cottonseed crushed in the nine-month period from August 1 to April 30 totaled 3,721,893 tons, compared with 2,841,811 tons in the corresponding period a year ago. Cottonseed on hand at mills April 30 totaled 321,790 tons, compared with 258,253 tons in the corresponding period last year. Cottonseed cake and meal production totaled 1,725,689 tons in the nine months ended April 30 this year, against 1,252,316 tons in the same nine months a year ago. Cottonseed cake and meal on hand April 30 totaled 92,080 tons, compared with 127,171 tons on the same date last year.

Daily Mill Stock Reporter, May 13, 1948, p.5.

COMMERCIAL PRODUCTION STARTS ON VICARA

Virginia Carolina Chemical Co. has just started commercial production of its "vegetable protein fiber," according to W. P. terHorst, general manager, at the Taftsville, Conn. plant recently purchased from Aralac, Inc. Several weavers are already planning to consume approximately one quarter of the company's present potential output of the new staple fiber Vicara. The capacity of the Taftsville plant is 10 million pounds of staple fiber a year, but output will be maintained at 2.5 million pounds a year until consumers response can be determined.

Currently the Company produces only staple fiber, but it eventually intends to manufacture continuous filament yarn from the new vegetable protein. The staple fiber is sold for $1 per pound, but this price will be reduced when improved production methods allow. "The Taftsville plant has been experimenting with peanut fiber as well as with its new vegetable fiber, but has decided to emphasize the vegetable staple." Mr. terHorst declared that "Government subsidy of peanut farmers is resulting in such a high price for peanuts that they are no longer commercially feasible for fiber production."

Vicara can be used to produce men's wear, women's wear fabric and blankets. Both underwear and men's hosiery are being developed by the company's outlets. Its resiliency imparts a desirable hand. The staple fiber will be sold in 1.5 and 4 deniers, all lengths. The fiber can be blended with wool, rayon acetate or viscose, cotton, and nylon. Fabrics can also be produced using 100 percent Vicara. Vicara fabric has a residual shrinkage of less than 1/2 percent, is mothproof, burns relatively slow, is odorless when wet, and can be dyed with acid or chrome dyes, using sulphuric acid at the boil.

The company is interested in selling to those mills which produce end products from Vicara that show promise of being the most desirable to the ultimate consumer. Both underwear and men's hosiery are being developed by the company's outlets to this end.

Journal of Commerce, May 21, 1948, p. 12.

L I N T E R S A N D C E L L U L O S E

CELLULOSE PRICES REMAIN UNCHANGED

Prices of purified linters remained unchanged from March to April. Present wood pulp prices were announced on March 15th.

Table 9.- Average annual prices of purified linters and dissolving wood pulp, 1946-47, and monthly quotations November 1947 - April 1948

Cents per pound

	Purified linters 1/	Wood pulp 2/		
		Standard viscose grade	High-Tenacity viscose grade	Acetate & cupra grade
1946	9.50	5.60	5.80	6.20
1947	16.30	7.00	7.40	8.00
1947, November	13.25	7.10	7.55	8.20
1947, December	13.25	7.45	7.90	8.60
1948, January	13.00	7.45	7.90	8.60
1948, February	13.00	7.45	7.90	8.60
1948, March	12.25	7.65	8.12	8.85
1948, April	12.25	7.85	8.35	9.10

1/ Weighted averages, 1946-47. Compiled from letters from a producer. F.O.B. pulp plant.

2/ Average of average monthly prices, 1946-47. Compiled from Rayon Organon and from letters to us from producer. Wood pulp prices are F.O.B. domestic producing mill, full freight allowed, and 3% transportation tax allowed, December 1, 1947 on; freight equalized with that Atlantic or Gulf port carrying lowest backhaul rate to destination plus 3% of backhaul charges, prior to December 1st.

METHOD DEVELOPED TO GET RAYON PULP FROM BAGASSE

A process has been developed for the manufacture of high alpha dissolving pulp for rayon manufacture from sugar-cane bagasse, according to Stewart E. Seaman, rayon pulp consultant. Viscose process rayon filament yarn has been made experimentally from the pulp derived from bagasse, Mr. Seaman added. The yarn was made by one of the rayon yarn producing companies in the United States on standard spinning equipment, he said, and the quality was considered to meet requirements for commercial textile use. Dry tenacity was reported at 2 grams per denier. Acetate yarn had been made of the new pulp but tests have not yet been conducted on the yarn. Actual production of the new pulp has not been decided upon, as yet, Mr. Seaman said, but plans for the erection of a plant in American territory are under consideration. It may be several months before a decision is reached and probably two years would be required to build a pulp plant.

Potential world rayon production is far ahead of capacity to produce dissolving pulp for rayon manufacture, Mr. Seaman said. While several rayon yarn and staple plants are under construction in various parts of the world, the rayon industry of the older rayon producing countries in Europe has not been rehabilitated to its former production level. Thus, a good deal of potential production is represented by existing plants.

Italy, Belgium, England, France and other rayon-producing countries are importers of dissolving pulp, he pointed out, as is the United States which br brings in 2 million tons per year from outside. Sweden, one of the important sources of pulp has dismantled some of her pulp mills for lack of wood, he added.

Daily News Record, April 20, 1948, p. 38.

CELANESE GRANTED FOREST LICENSE IN PULP PROJECT

Columbia Cellulose Co., Ltd., a subsidiary of Celanese Corp., received from the Government of British Columbia a forest management license for extensive tracts of forest land in the province on May 4th. Under this license, logging will be regulated so that forest resources will be perpetuated. The tract of land covered by the management license is in the Prince Rupert Forest district and will provide a sustained wood supply for the cellulose plant on Watson Island near Prince Rupert. Preparation of the cellulose plant site is nearing completion and construction is to begin shortly. It is estimated that approximately two years will be required to complete the project. Plans call for production capacities of 200 tons daily of highly purified cellulose. Production from this plant will be used to supply some of Celanese's requirements of cellulose for its yarns and plastics.

Daily News Record, May 5, 1948, p. 2.

M I S C E L L A N E O U S

PRODUCTION OF BAGASSE PRODUCTS TO BE EXPANDED IN HAWAII

Hawaiian Cane Products, Ltd., recently sold to the Flintkote Co., N.Y., was manufacturer last year of 97.5 million square feet of bagasse wall board, insulation lath, decorative tile, etc. This concern in 1948 will use from 35,000 to 40,000 tons of bagasse, the crop from 2 of Hawaii's 29 plantations, but its Hilo plant will be expanded "to meet growing demands." It takes about 6 to 7 tons of sugar cane to produce a ton of bagasse, and Hawaii's yearly production of cane runs over 10 million tons a year. At most plantations bagasse is still used to fire boilers.

Wall Street Journal, April 27, 1948, p.16.